

I. In the Press – Mitch Jackson and FedEx

FedEx Express adding more electric vehicles to fleet

Memphis Business Journal – May 17, 2012

FedEx Express [announced](#) that its vehicle fleet is more than 16 percent more fuel efficient, well ahead of the pace needed to reach its goal of making its vehicles 20 percent more efficient by 2020.

“We have achieved 80 percent of our vehicle fuel efficiency goal as of the conclusion of fiscal year 2011, compared to our original baseline set in 2005,” said [Mitch Jackson](#), staff vice president of environmental affairs and sustainability, with FedEx Corp. “As a result, we are reevaluating our 2020 goal to potentially raise the standard we originally set out to achieve.”

Fedex Express is adding 87 electric vehicles to its fleet, raising the number of all-electric vehicles to 130. The new all-electric vehicles are being deployed in California, Texas, New York City and Rockville, Md., as well as various locations in Asia and Europe. Last summer, FedEx [deployed a group](#) of 24 all-electric vehicles in Memphis, Chicago and New York City.

Fedex (NYSE: FDX) is currently working with General Electric and Columbia University to create charging facilities for the all-electric trucks. For the rest of the fleet, 20 percent of all diesel vehicles have been replaced with more fuel efficient models, like the Dodge Sprinter van, which can be 70 percent to 100 percent more fuel efficient than the vehicles they replaced. Fedex Express is also investing in lower weight trucks and hybrid hydraulic technology which both aim to improve fuel efficiency.

In April 2011, [FedEx joined](#) United Parcel Service Inc., AT&T Inc., PepsiCo Inc. and Verizon Communications Inc. as charter members of [President Barack Obama's National Clean Fleets Partnership](#)^[ng: see page 3], a program aiming to expand the use of electric vehicles and alternative fuels.

Businessweek - FedEx's Electric Vehicle Experiment

By [Claire Suddath](#) on April 05, 2012

<http://www.businessweek.com/printer/articles/17688-fedexs-electric-vehicle-experiment>

At a FedEx package distribution center in lower Manhattan, amid the forklifts, carts, and conveyer belts that send thousands of packages out for delivery every day, are 10 vehicles that look like something out of the Jetsons. They're FedEx's electric-powered delivery vans, and they're part of a study by FedEx, Columbia University, and General Electric. The idea behind their initiative is this: To switch from gasoline to electric-powered vehicles, a national delivery service must have a convenient and cost-effective way to charge them.

FedEx has been quietly dipping its toe into the electric vehicle, or EV, market since it deployed a few vans on London delivery routes in 2008. Currently, the company has 43 EVs in service—in the U.S., you can find them in Los Angeles, Chicago, and New York. It isn't the only company to use electric delivery vehicles; UPS has 29 and Frito-Lay (whose parent company is PepsiCo)

has 176 electric trucks running potato chips and other goods to stores across the U.S. and Canada. All three companies are part of the Obama administration's [National Clean Fleets Partnership](#). But the ones at FedEx are special because they're part of an important experiment. At a distribution center in Chicago, FedEx is currently testing several different vehicles designed by different companies to find the most cost-efficient and reliable model for large-scale, national use. In New York, the question to be solved has to do with the city's power grid. "I believe electric vehicles are a great solution to our energy and pollution problems, but the way most cities are designed now, for a company like FedEx to use them, there's a lot of red tape," says Keshav Sondhi, FedEx's manager of global vehicles. In other words, you can't just install some electric sockets, invest in a few oversize cords, and plug the trucks in. The electric bill would be too high, and neither FedEx nor the power companies yet know how such an increase in power demand would affect the city's grid.

The problem, Sondi explains, is that each of these vans "requires the same amount of energy as an average suburban house." If FedEx were to use an entire fleet of electric vans—roughly 100 to 200 vehicles per delivery center—when they recharged, their energy demands would be equivalent to a small neighborhood. And although they can go 100 miles per charge (and carry 3,300 lbs. of packages), once depleted they take eight hours to reach full capacity again. "If you charged them at the same time, you'd overload the system, and there would be a blackout," says Leon Wu, researcher for Columbia University's Center for Computational Learning Systems, which is working with FedEx on the project. "Or the transformer will explode. It would happen."

But unlike a neighborhood, vehicles don't need constant electricity. Maybe they could be charged in waves or partially charged. Wu and his fellow researchers are analyzing data from the trucks and their GE-supplied chargers to find a solution. GE has also installed electric meters to track the flow of energy into and out of the vehicles.

"We want to know how much electricity is going into the charging station, how many times each truck is being recharged, how many trips they take, and how far they go—all the electric parameters that come with a vehicle like this," says Matt Nielsen, GE Global Research's lead scientist on the project. "We're trying to bring in data from a lot of different sources." That the electric vehicle still requires this much study—much less one requiring the expertise of GE and Columbia University scientists—is testament to its beleaguered history. FedEx's current EVs cost two to three times as much as traditional delivery vans, although the company estimates that its operational costs per mile are 75 percent lower than those powered by gas. According to delivery driver Lamar Wilkinsin, the futuristic-looking vans prompt questions and stares when he drives them through lower Manhattan—the same place where electric taxis first traveled as early as 1897.

Whatever the outcome, FedEx's experiment will be closely watched. Sondhi says he has already been approached by the Defense Department, which may be interested in learning how to equip bases for electric automobiles. Even EV experts such as Frito-Lay could learn a thing or two; right now, because of energy constraints, Frito-Lay has no more than 20 vehicles at any one warehouse and sometimes has to partner with utility companies to bring more energy into the buildings to accommodate them. FedEx's EV recharging experiment is set to end in 2013. The company will then assess its options for expanding its use of electric vans—something Wilkinsin

hopes they'll do. He has been driving FedEx delivery trucks for 16 years and says the EVs are the best vans the company has ever given him. They have a tighter turning radius, and their nearly silent ride make his delivery shifts much more enjoyable. "I try to grab them first," he says. "But they're pretty popular, and there are only 10 of them. Sometimes the other drivers get to them before me. I try not to resort to the old trucks."

II. Some efforts to reduce emissions

EPA's Clean Tech Initiative

Representatives from FedEx attended our Bakersfield Clean Tech Initiative meeting in February. FedEx was a charter member of Smartway and has been very supportive of natural gas, hybrid and electric trucks. News articles attached. .

DOE's National Clean Fleets Partnership

FedEx is among the 5 charter members of the [National Clean Fleets Partnership](http://www1.eere.energy.gov/cleancities/national_partnership.html), a DOE initiative to help big companies reduce fuel consumption through the use of more electric vehicles, alternative fuels and fuel-saving measures. FedEx joined in April 2011. Back in 2004 FedEx put into regular service its first hybrid electric delivery truck. By 2011, the company operated more than 400 advanced electric and hybrid-electric vehicles. In addition, FedEx operates vehicles running on biodiesel, propane, and natural gas.

http://www1.eere.energy.gov/cleancities/national_partnership.html

EPA's EJ Small Grant

We have an EJ Small Grant with Greenaction. Its goal is to encourage truckers to not idle, educate truckers and community about health risks associated with idling and work with local fleets to encourage them to retrofit trucks, etc. and connect them with funding opportunities. Debbie Lowe Liang and Trina Martynowicz are scheduling a call with Fed Ex to discuss opportunities for deploying their cleanest trucks in this region, as well as ensuring idle reduction activities are undertaken.

III. Future Location of the Fed-Ex Terminal in Kettleman City, CA (from Waste Division)

- Building permits have been approved for construction on the new 47-acre 120,000 square foot terminal/shop.
- The terminal valued at \$10 million, will be located at 33104 25th Ave. on land owned by farming enterprise Sandridge Partners along the California Aqueduct.
- The terminal will accommodate as many as 85 trucks a day hauling 15.8 million pounds a month.
- The 24 hour terminal will shuttle trucks and trailers between Northern and Southern California off of 25th Ave onto Highway 41 east of Highway 5.
- The terminal will add to other transportation services that have established a major presence at the Highway 41 and Interstate 5 hub, including California Overnight and Con-Way Western Express.

- The terminal potentially could be the largest employer in the community and could employ 60 to start and 125 upon build out (15.3% of Kings County's population is without jobs, while Kettleman City's jobless rate is at 27%).

